**REMARKS**

Claims 1-10, 12, 13, 15, 17-23, 25, and 28-32 are pending in the application.

Claims 1-10, 12, 13, 15, 17-23, 25, and 28-32 stand rejected.

Claims 1, 15, and 28 have been amended. Support for these amendments can be found throughout the originally filed application. For example, support can be found in FIG. 9 and paragraphs [0067]-[0068] of the specification.

*Examiner Interview*

Applicants express appreciation for the Examiner's participation in the telephonic interview of November 9, 2009, and acknowledge the Examiner's comments regarding the pending claims, and cited references. The amendments and remarks contained herein are offered with these discussions in mind.

*Rejection of Claims Under 35 U.S.C. § 112*

Claims 1, 15, and 28 stand rejected under 35 U.S.C. § 112, first paragraph. *See* Office Action, p. 2. Claim 1 stands rejected since its limitation of "disabling the first node from accessing the portion of the physical data storage device" is purportedly "not described in the specification. Office Action, p. 2. However, Applicants respectfully submit that the specification does support this limitation. For example, the specification states:

> One subcluster will win and the other subcluster will recognize the error condition that it has been excluded from the membership information in the coordinator volume. Finally in step **950** node A continues operation with the I/O fence in place. Had node A failed to gain control of the coordinator volume as determined in **940**, node A would eject itself from the cluster **945**. Correspondingly, a determination is made in **960** whether node B did gain control of the coordinator volume. If so, node B requests the volume server to <u>ensure that node A is unregistered</u> from data disks or

> volumes in step **970**. If the volume server is able to communicate with node A, it may <u>revoke the delegation from node A</u>, otherwise it may use SCSI-3 persistent reservation commands to <u>cut off node A's access to the data disks</u>. Thus in **980**, node B attaches the volume with exclusive access rights and takes over operation with an I/O fence in place. In performing this operation, node B can <u>prevent data disks or volumes from accepting I/Os from other cluster nodes or volume clients not belonging to the cluster</u>.

Specification, ¶ [0068] (emphasis added). Therefore, Applicants respectfully request the reconsideration and withdrawal of the rejection against claim 1. In addition, since claims 15 and 28 have been rejected on similar grounds (Office Action, p. 2), Applicants respectfully request, for similar reasons, the reconsideration and withdrawal of the rejection against claims 15 and 28.

### *Rejection of Claims under 35 U.S.C. § 102*

Claims 1-10, 12, 13, 15, 17-23, 25, and 28-32 stand rejected under 35 U.S.C. §102(e) as purportedly being anticipated by U.S. Patent Publication No. 2005/0268154 naming Wipfel et al. as inventors (Wipfel). *See* Office Action, p. 3.

Independent claims 1, 15, and 28 contain language directed toward the removal of a first node from a computer system cluster <u>in response to</u> <u>an attempt to gain control of a coordinator virtual device being unsuccessful</u>. Applicants submit that Wipfel fails to teach the requirements contained in such language. Wipfel removes nodes from its clusters based on other criteria. Wipfel states that

> [0068] The resolution of cluster partition is implemented by a static algorithm where the partition with the <u>majority of nodes</u> survives and the nodes in the <u>minority partition</u> eat the poison pill. In case of a tiebreaker, the following algorithm is implemented.

> [0069] First, in case of a two-node cluster, the node that is <u>connected to the local area network</u> wins the tiebreaker and the node which is <u>disconnected from the local area network</u> loses the tiebreaker.

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[0070] Second, the partition whose <u>master node has not changed</u> from previous membership wins the tiebreaker and the partition whose <u>master node has changed</u> loses the tiebreaker.

Wipfel, ¶¶ [0068]-[0070] (emphasis added). Thus, Wipfel removes nodes from its clusters based upon (1) whether its nodes fall into a partition having fewer nodes than a competing partition, (2) whether its nodes are disconnected from a local area network, or (3) whether its nodes fall into a partition having a master node that has changed. Wipfel does not remove its nodes from a computer system cluster in response to an attempt to gain control of a coordinator virtual device being unsuccessful.

Applicants are aware that the Office Action cites ¶¶ [0041], [0052], and [0075] of Wipfel in order to support its assertion that Wipfel teaches removing a first node from a computer system cluster in response to an attempt to gain control of a coordinator virtual device being unsuccessful. *See* Office Action, pp. 3 and 7. However, as would be expected in light of the above discussion of Wipfel, none of these paragraphs teach the removal of a first node from a computer system cluster <u>in response to an attempt to gain control of a coordinator virtual device being unsuccessful</u>.

Paragraph [0041] merely states that it must be determined quickly "whether it is necessary to 'freeze out' or 'fence off' (temporarily remove) the silent node." It does not provide the conditions under which nodes are removed from a cluster.

Paragraph [0052] fails to discuss the removal of a node from a cluster at all. Instead it discusses the effects of a cluster becoming partitioned on Wipfel's membership lists and epoch numbers. Though the second paragraph states that node lists for other nodes in the cluster "will exclude the node(s) [of the cluster] that failed," this does not imply that the nodes have been removed from the cluster. This simply describes a

situation that can be exploited in order for Wipfel to detect that a partition has been created, as discussed in ¶¶ [0065]-[0066] of Wipfel.

Paragraph [0075] also fails to discuss the removal of a node from a cluster. Instead it discusses the releasing and reserving of a SCSI disk in order to <u>prevent</u> multiple nodes of a cluster from having simultaneous access to a SCSI disk, and to <u>prevent</u> cluster partitioning in the first place.

Thus, for at least the reason that Wipfel fails to teach the removal of a first node from a computer system cluster <u>in response to</u> <u>an attempt to gain control of a coordinator virtual device being unsuccessful</u>, Applicants respectfully request the reconsideration and withdrawal of the rejection against independent claims 1, 15, and 28 and their respective dependent claims, and a notice of the allowance of the same.

However, notwithstanding the foregoing, Applicants have amended independent claims 1, 15, and 28, according to suggestions offered by the Examiner during the above-mentioned teleconference, in order to speed prosecution. Applicants have amended these claims to contain limitations directed toward (1) a first node <u>engaging in a race</u> with a second node, and (2) removing the first node from the computer system cluster in response to the first node failing to gain control of the coordinator virtual device <u>by losing the race</u>. Since the cited sections of Wipfel fail to mention, or make reference to, any kind of race at all, Wipfel cannot teach or suggest these limitations. Thus, for at least this additional reason, Applicants respectfully request the reconsideration and withdrawal of the rejection against independent claims 1, 15, and 28 and their respective dependent claims, and a notice of the allowance of the same.

In addition, independent claim 32 recites (1) "a first node of a computer system cluster <u>engaging in a race</u> to gain control of a coordinator virtual device," and (2) "removing the first node from the computer system cluster in response to the first node
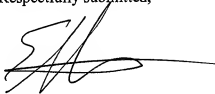
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failing to gain control of the coordinator virtual device by <u>loosing the race</u>." Since, as stated above, the cited sections of Wipfel fail to mention, or make reference to, any kind of race at all, Wipfel cannot teach or suggest these limitations. Thus, for at least this reason, Applicants respectfully request the reconsideration and withdrawal of the rejection against independent claim 32, and a notice of the allowance of the same.

## CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephonic interview, the Examiner is invited to telephone the undersigned.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, Applicant hereby petitions for such extensions. Applicant also hereby authorizes that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to Deposit Account 502306.

Respectfully submitted,

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